6SJ7
6SJ7-GT

6SJ7, 6SJ7-GT
SHARP-CUTOFF PENTODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.3	ac or dc volts
Current	0.3	amp

Direct Interelectrode Capacitances:

	6SJ7°	6SJ7-GT°°	
Pentode Connection:			
Grid No.1 to Plate	0.005 max.	0.005 max.	μμf
Input	6	7	μμf ←
Output	7	7	μμf ←
Triode Connection:*			
Grid No.1 to Plate	2.8	2.8	μμf
Grid No.1 to Cathode	3.4	3.4	μμf
Plate to Cathode	11	11	μμf

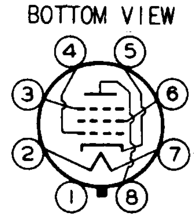
° With shell connected to cathode.
°° With external shield connected to cathode.
* With grid No.2 and grid No.3 connected to plate.

Mechanical:

	6SJ7	6SJ7-GT
Mounting Position	Any	Any
Maximum Overall Length	2-5/8"	3-5/16"
Maximum Seated Length	2-1/16"	2-3/4"
Maximum Diameter	1-5/16"	1-5/16"
Bulb	Metal Shell, MT8G	T-9
Base	Small-Wafer Octal 8-Pin	Sm.-Wafer Octal 8-Pin, Sleeve
Basing Designation	8N	GT-8N

BOTTOM VIEW

Pin 1 { 6SJ7, Shell; 6SJ7-GT, Base Sleeve
Pin 2 - Heater
Pin 3 - Grid No.3



Pin 4 - Grid No.1
Pin 5 - Cathode
Pin 6 - Grid No.2
Pin 7 - Heater
Pin 8 - Plate

AMPLIFIER - Class A_1
Pentode Connection

Maximum Ratings, ***Design-Center Values:***

PLATE VOLTAGE	300 max.	volts
GRID-No.2 (SCREEN) VOLTAGE	125 max.	volts
GRID-No.2 SUPPLY VOLTAGE	300 max.	volts
PLATE DISSIPATION	2.5 max.	watts
GRID-No.2 DISSIPATION	0.7 max.	watt ←
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive bias value	0 max.	volts
PEAK HEATER-CATHODE VOLTAGE: ←		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts

← Indicates a change.

6SJ7
6SJ7-GT

6SJ7, 6SJ7-GT
SHARP-CUTOFF PENTODE

Typical Operation and Characteristics:

Plate voltage	100	250	volts
Grid No.3 (Suppressor)	Connected to cathode at socket		
Grid-No.2 Voltage	100	100	volts
Grid-No.1 Voltage	-3	-3	volts
Plate Resistance (Approx.)	0.7	#	megohm
Transconductance	1575	1650	μmhos
Grid-No.1 Bias (Approx.) for plate current of 10 μamp	-8	-8	volts
Plate Current	2.9	3.0	ma
Grid-No.2 Current	0.9	0.8	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance . . . . 1 max. megohm

AMPLIFIER - Class A_1

Triode Connection - Grids No.2 and No.3 Connected to Plate

Maximum Ratings, *Design-Center Values*:

PLATE VOLTAGE	250 max.	volts
PLATE DISSIPATION (Total)	2.5 max.	watts
GRID-No.1 VOLTAGE:		
Positive bias value	0 max.	volts
→ PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts

Typical Operation and Characteristics:

Plate Voltage	180	250	volts
Grid-No.1 Voltage	-6	-8.5	volts
Amplification Factor	19	19	
Plate Resistance (Approx.)	8250	7600	ohms
Transconductance	2300	2500	μmhos
Plate Current	6.0	9.2	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance . . . . 1 max. megohm

\# Greater than 1 megohm.

For additional data, see RESISTANCE-COUPLED AMPLIFIER CHART at the front of this Section

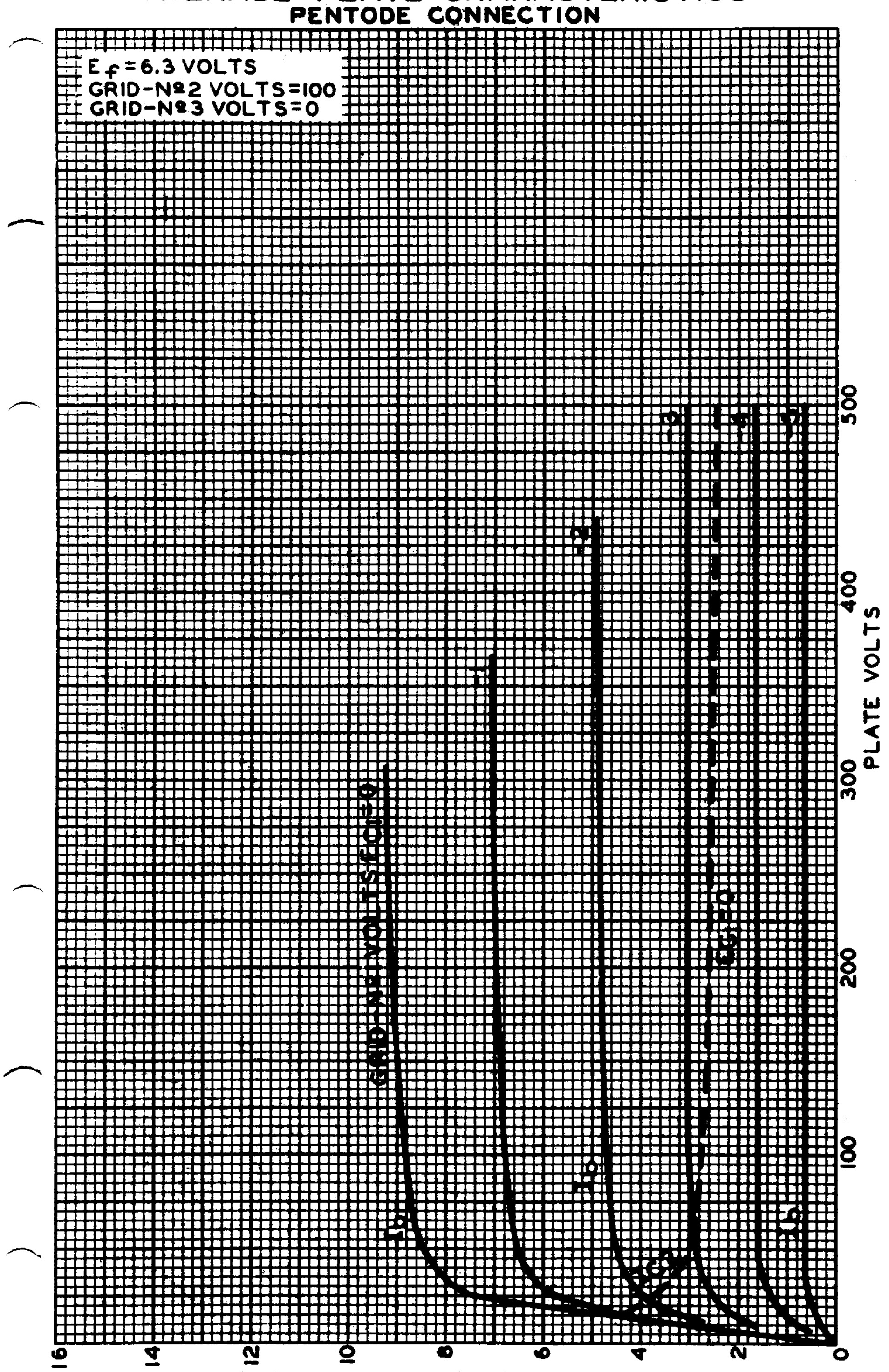
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6SJ7

6SJ7

AVERAGE PLATE CHARACTERISTICS
PENTODE CONNECTION



OCT. 16,1947 **TUBE DEPARTMENT** 92CM-4939R1

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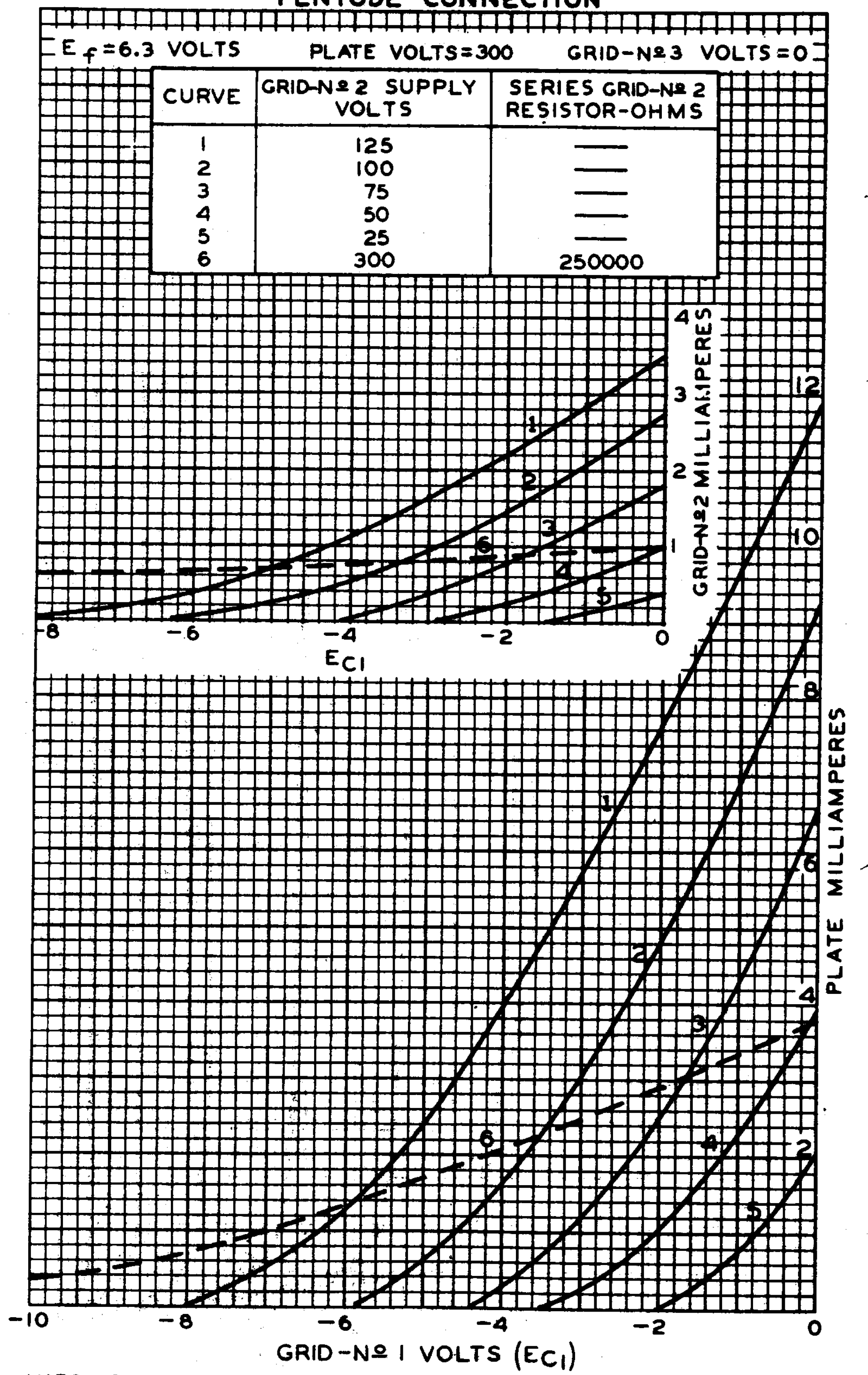
RCA

6SJ7

AVERAGE CHARACTERISTICS
PENTODE CONNECTION

E_f = 6.3 VOLTS PLATE VOLTS = 300 GRID-No 3 VOLTS = 0

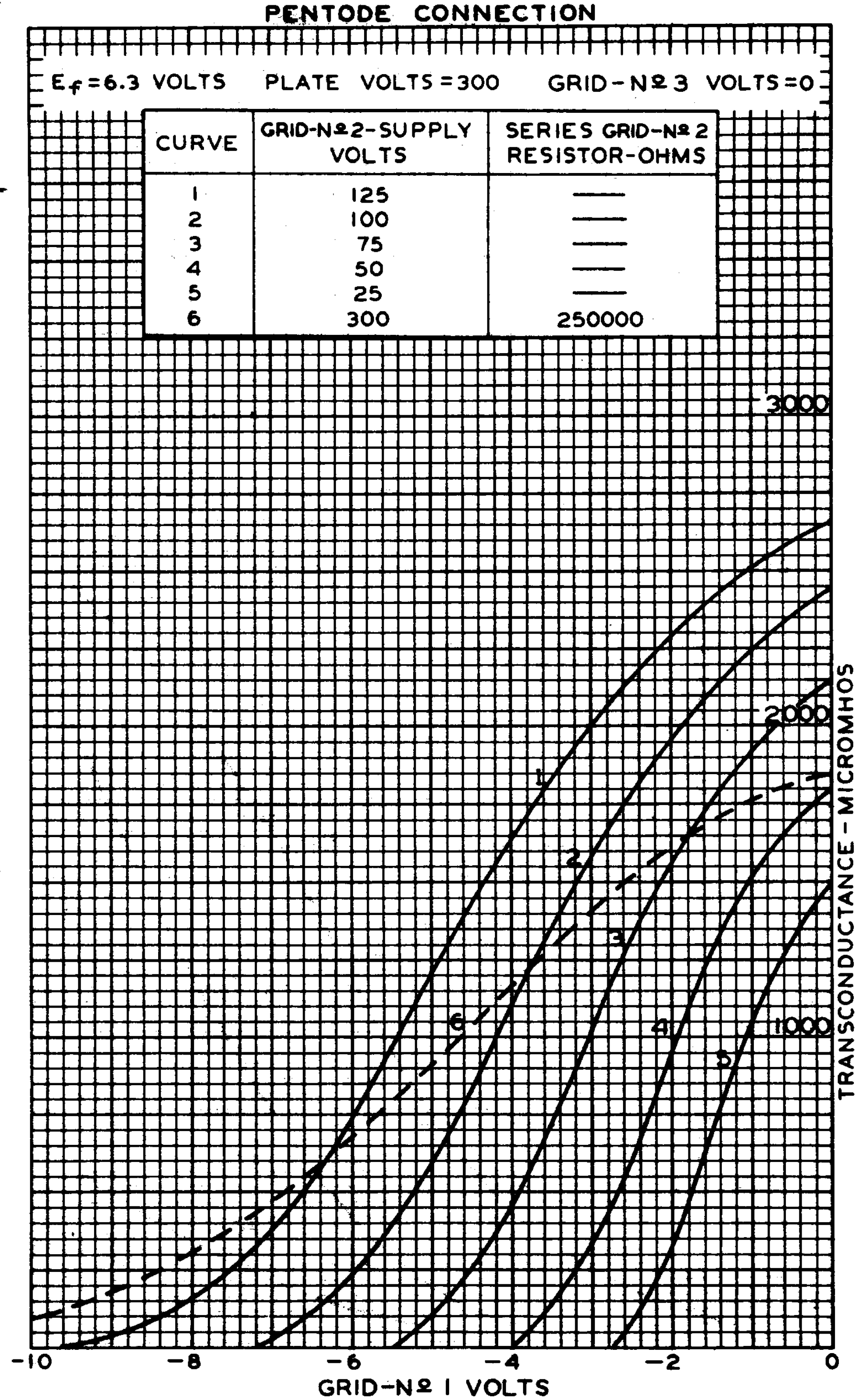
CURVE	GRID-No 2 SUPPLY VOLTS	SERIES GRID-No 2 RESISTOR-OHMS
1	125	—
2	100	—
3	75	—
4	50	—
5	25	—
6	300	250000



RCA

6SJ7

AVERAGE CHARACTERISTICS
PENTODE CONNECTION

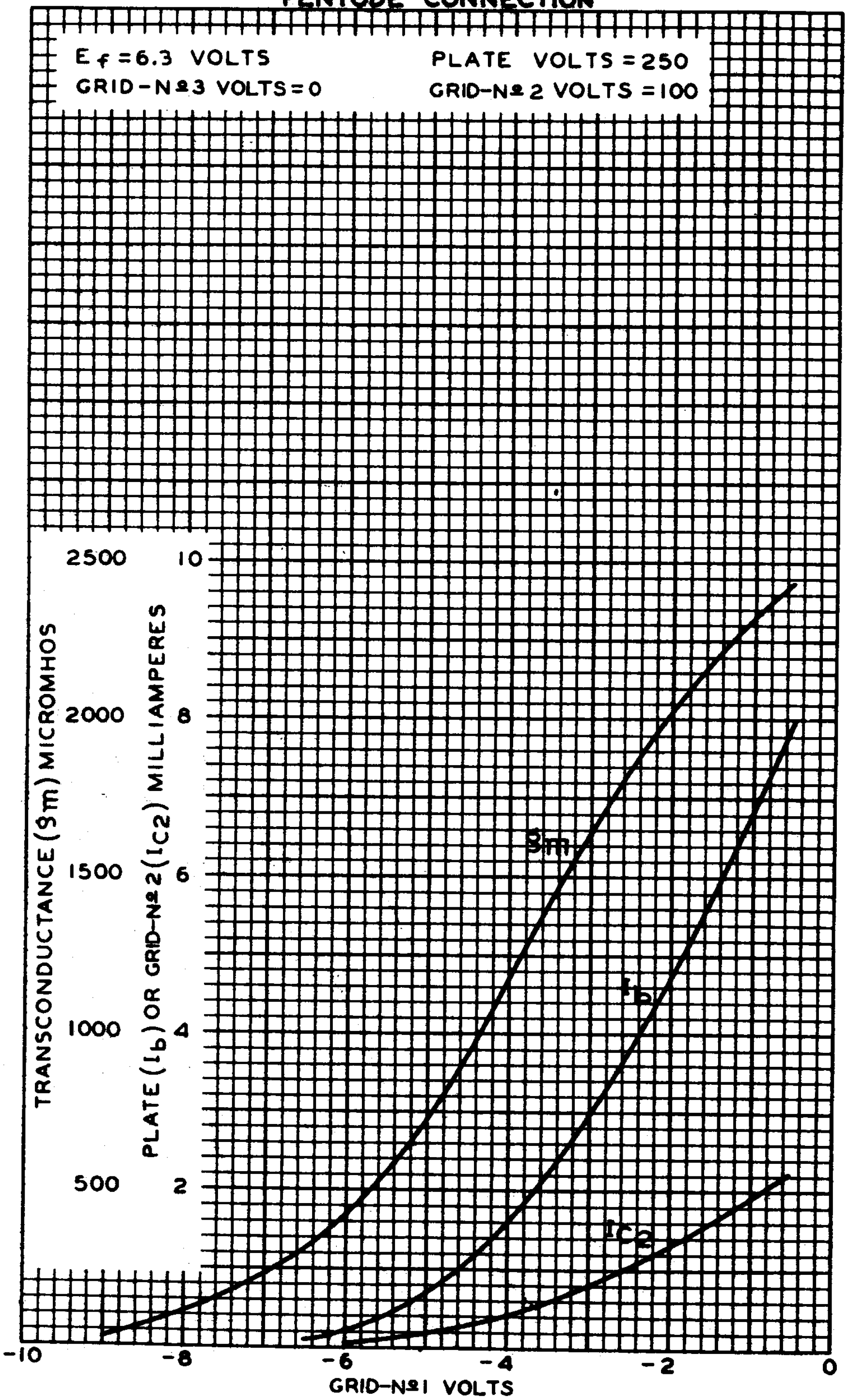


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6SJ7

6SJ7

AVERAGE CHARACTERISTICS
PENTODE CONNECTION



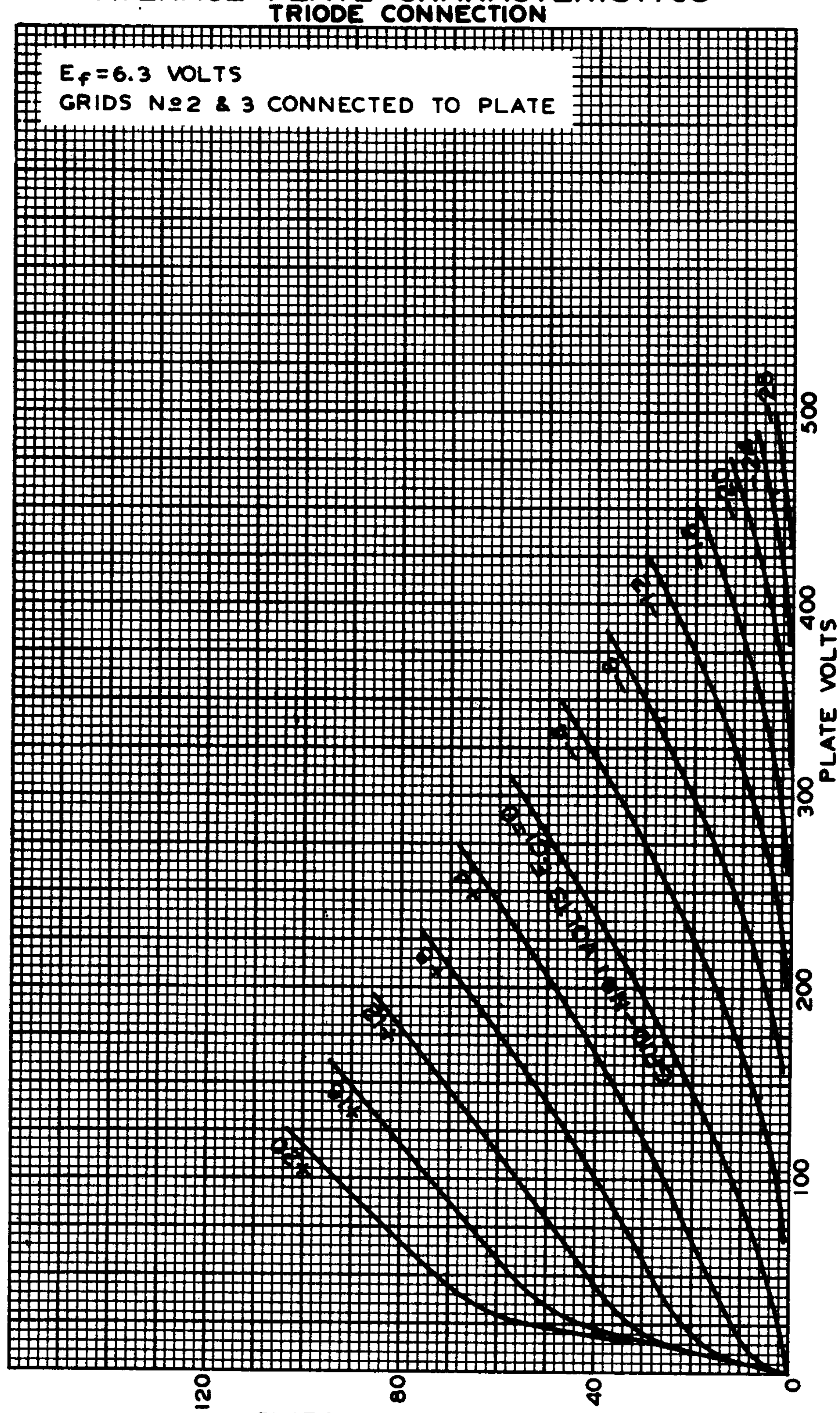
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92CM-4937R1

6SJ7

6SJ7
AVERAGE PLATE CHARACTERISTICS
TRIODE CONNECTION



MAY 12,1948

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RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6409R1